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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,293	04/25/2000	Mrudula Kanuri	95-343	9755

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MANELLI DENISON & SELTER  
2000 M STREET NW SUITE 700  
WASHINGTON, DC 20036-3307

EXAMINER

HARPER, KEVIN C

ART UNIT	PAPER NUMBER
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2666

10

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/558,293

Applicant(s)

KANURI ET AL.

Examiner

Kevin C. Harper

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-24 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

Applicant's arguments filed May 20, 2004 have been fully considered but they are not persuasive.

1. Applicant argued that Callon does not disclose performing layer three switching based on the presence of layer 3 packet information. However, the router of Callon inherently determines whether or not a packet has layer 3 packet information in order to route the packet as an IP packet or a non-IP, layer 2 packet (col. 51, lines 25-30; col. 50, lines 65-68). The limitations of the claims do not preclude the additional special condition of the router of Callon where layer 2 switching is performed for an IP packet with a particular layer 2 address (note: the router of Callon meets the claim limitations for forwarding packets as described in col. 51, lines 25-30).

2. Regarding claims 1 and 14, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the integrated network switch being an integrated silicon chip configured for switching data packets based on control data and switching data stored on-chip) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

3. Applicant argued that Callon does not disclose two switch tables as claimed. However, the router has an inherent table for forwarding packets to the correct output link based on an IP address and an inherent table for forwarding packets to the correct output link based on a layer 2 subnetwork identifier (col. 1, lines 31-35; col. 50, lines 65-68; Figure 1).

***Terminal Disclaimer***

4. The terminal disclaimer filed on November 24, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,574,240 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 12-14, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Callon et al. (US 5,251,205).

5. Regarding claims 1-3 and 12-14, Callon discloses an integrated network switch (Figure 13, any one of items 502-506; col. 50, lines 65-68) having inherent address tables and for determining whether a layer 2 packet includes layer 3 information (col. 51, lines 23-33), selectively performing layer 3 switching based on an inherent the layer 3 destination address in the packet (col. 51, lines 27-30), and selectively performing layer 2 switching based on the determined absence of the layer 3 packet information (col. 51, lines 25-26).

6. Regarding claim 20, the switching decision is based on a packet's priority (col. 45, lines 59-64 and col. 46, lines 11-20).

7. Regarding claim 22, a new MAC address is given which is associated with a router and based on the IP information in the header (col. 51, lines 29-30).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4-6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callon et al, as applied to claims 3 or 14 above, in further view of Yoshida et al. (US 5,987,524).

8. Regarding claims 4-6 and 15, Callon does not disclose comparing a source address with a table for storing subnetwork identifiers. Yoshida discloses verifying source IP and MAC addresses and discarding packets with unidentified source IP and MAC addresses in order to provide access to authorized customers (Figure 8, step S51; col. 10, lines 10-22). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to verify the source IP address of a packet in the invention of Callon.

Claims 8-10, 16-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callon et al, as applied to claims 3 or 14 above, in further view of Tappan (US 5,991,300).

9. Regarding claims 8-9, 16-17 and 21, Callon does not disclose dropping a packet when a TTL reaches zero or decrementing the TTL field prior to outputting a layer 2 packet. Tappan discloses both these features (col. 3, lines 38-41) in order to prevent a packet from having excessive delay or being forwarded in a continual loop. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to decrement the TTL field in a packet or drop a packet when the TTL field reaches zero in the invention of Callon.

10. Regarding claim 10, Callon discloses determining that the MAC address specifies a router and a destination IP address specifying a network node (col. 51, lines 29-30), and inherently replacing the destination MAC address with a MAC address specifying the network node (col. 50, lines 59-62 and col. 51, lines 10-16).

11. Regarding claim 18, the limitations of this claim are addressed in the rejection of claim 15.

12. Regarding claim 19, the limitations of this claim are addressed in the rejection of claims 14-15.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Callon et al, in view of Tappan, as applied to claim 10 above, in further view of Bardet et al. (US 5,260,936).

13. Callon in view of Tappan does not disclose recalculating an IP checksum and MAC cyclic redundancy check. Bardet discloses recalculating IP checksums and MAC CRCs (col. 1, lines 57-61 and col. 2, lines 15-23) in order to prevent errors as a packet is forwarded to another node (col. 1, lines 32-33). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to recalculate IP checksums and MAC CRCs in the invention of Callon in view of Tappan.

Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callon et al. in view of Kadambi et al. (US 2001/0012294).

14. Regarding claims 23-24, Callon discloses a router for performing layer 2 and layer 3 switching. However, Callon does not disclose that the router is implemented as an integrated network switch on a single integrated chip. Kadambi discloses a layer 2 and layer 3 switch that is integrated on a chip (Figures 1-2; para. 7 and para. 150, last 10 lines). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have switching functions integrated on a single chip in the invention of Callon in order to reduce the cost and complexity of network switching nodes or routers (Kadambi, para 33, lines 17-31).

#### *Allowable Subject Matter*

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the

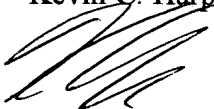
date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139 (as of August 25, 2004, the number will be 571-272-3166). The examiner can normally be reached weekdays from 11:30 AM to 8:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 703-308-5463 (as of August 25, 2004, the number will be 571-272-3174). The centralized fax number for the Patent Office is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only (applications must be associated with a customer number). For more information about the PAIR system, see [pair.uspto.gov](http://pair.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin C. Harper



August 8, 2004

*Seema S. Rao*  
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